

2x16W Stereo / 1x20W Mono Class-D Audio Amplifier With Built-in Step-up Converter

Features

- Input voltage 2.9V~12V
- Adjustable boost converter output up to 14V
- Loudspeaker power @12V boost from 8.4V
Stereo: 13W/CH into 4Ω @THD+N=1%
Stereo: 15W/CH into 4Ω @ <10% THD+N
Mono (PBTl): 19W/CH into 4Ω @THD+N=10%
- Loudspeaker power @8V boost from 4.2V
Stereo: 6W/CH into 4Ω @THD+N=1%
Stereo: 7.5W/CH into 4Ω @ <10% THD+N
Mono (PBTl): 8.7W/CH into 4Ω @THD+N=10%
- Differential inputs signal
- Fixed gain setting
- Internal oscillator
- Short-Circuit protection with auto recovery option
- Under-Voltage detection
- Over-Voltage protection
- Pop noise and click noise reduction
- Output DC detection for speaker protection
- Filter-Free operation
- Over temperature protection with auto recovery
- Superior EMC performance

Applications

- Blue-tooth Box
- Portable Media
- Audio Docking System
- Tablet Personal PC
- Consumer Audio Equipment

Description

The XA9523 is a high efficiency stereo class-D audio amplifier with built-in boost DC-DC converter. The loudspeaker driver can deliver stereo 15W/CH output power into 4Ω loudspeaker under 10% THD+N at two-cell Li-ion battery (8.4V).

XA9523 provides parallel BTL (Mono) application also, and it can deliver 19W into 4Ω loudspeaker at 8.4V supply voltage.

Output DC detection prevents speaker damage from long-time current stress. XA9523 provides superior EMC performance for filter-free application. The output short circuit and over temperature protection include auto-recovery feature.

Simplified Application Circuit

